

Remarks

Favorable reconsideration on this application, in view of the above amendments and in light of the following remarks and discussion, is respectfully requested.

Claims 1-7 are currently pending in the application; Claims 1-7 having been amended by way of the present response.

In the outstanding Office Action, the drawings are objected to because the provided figure has no reference label such as "Fig. 1" to distinguish and title the figure. In response, Applicants respectfully assert that pursuant to 37 C.F.R. § 1.84(u)(1), because only a single figure is used to illustrate the invention, Applicants are prohibited from numbering the view, and are further prohibited from titling the figure with the abbreviation "Fig." Thus, Applicants respectfully request that the objection to the drawing be withdrawn.

In the Office Action, guidelines that illustrate a preferred layout for the specification are helpfully suggested by the Examiner for Applicants' use. Further, the disclosure was objected to because of informalities. In response, Applicants have amended the specification to include applicable section headings, as appropriate. Thus, Applicants respectfully request that the objection to the specification be withdrawn.

In the Office Action, Claims 1-7 were rejected under 35 U.S.C. § 112, second paragraph. In response, Applicants have amended each of the claims so as not to be narrative and indefinite, to conform to standard U.S. practice, to correct grammatical and idiomatic errors, and to present discernable method steps.

Specifically, Applicants have amended Claim 1 to recite "calculating a shift of the interference pattern in real time." Claim 2 has been amended to recite "continuously irradiating comprises continuously irradiating the optical fibre and measuring the interference pattern at an angle between 48° and 72° to the incident light." Claim 3 has been amended to recite "continuously irradiating comprises continuously irradiating the optical fibre and

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measuring the interference pattern while the optical fibre is drawn at a drawing speed greater than 10 m/s.” Claim 4 has been amended to remove the previous recitation of “the device.” Claim 5 has been amended to recite “imparting the spin to the fibre with a device disposed downstream of a device configured to continuously irradiate the optical fibre.” Claim 6 has been amended to remove the recitation of “the device for imparting spin.” Claim 7 has been amended to recite “imparting the spin to the optical fibre with a device.” Thus, Applicants respectfully request that the rejection of Claims 1-7 under 35 U.S.C. § 112 be withdrawn.

In the Office Action, Claims 1-7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,283,628 to Dotson. Applicants respectfully request that the rejection of the claims be withdrawn for the following reasons.

As stated above, independent Claim 1 has been amended. Applicants respectfully assert that support for the changes to the claim is self evident from the originally filed disclosure, including the original claims, and that therefore no new matter has been added.¹

The present invention is directed to methods for measuring a spin in an optical fibre possessing an inherently small ovality. Independent Claim 1 recites continuously irradiating an optical fibre with incident light so as to form an interference pattern that is a function of a wavelength of the incident light, a refractive index of the fibre, and a diameter of the fibre. A shift of the interference pattern is calculated in real time. The spin in the optical fibre is determined based on the calculated shift in the interference pattern.

Dotson is directed to a method for measuring diameters of non-circular fibers. As shown in Figure 2, for example, of Dotson, an output of detectors 29 and 31 is analyzed separately to produce a signal representative of the diameter of the fiber. Once the two

¹ Please see, in-part Page 7, line 4-10 of Applicants originally filed specification.

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signals representative of the fiber diameter have been generated, they are simply averaged to produce a desired final signal which is representative of the fiber diameter.²

However, Applicants respectfully assert that Dotson does not teach or suggest the claimed method of continuously irradiating an optical fibre with incident light so as to form an interference pattern, calculating a shift of the interference pattern in real time, and determining the spin in the optical fibre based on the calculated shift in the interference pattern. In particular, Applicants respectfully assert that Dotson does not state that a shift of an interference pattern is calculated, and also does not state that a spin in an optical fibre is determined based on the calculated shift in the interference pattern. Specifically, independent Claim 1 recites “continuously irradiating an optical fibre with incident light so as to form an interference pattern . . . [,] calculating a shift of the interference pattern in real time . . . [,] and determining the spin in the optical fibre based on the calculated shift in the interference pattern.”

Inasmuch as the Office Action’s assertions may be applicable to the amended claim, Applicants respectfully note that the Office Action concedes that Dotson does not teach or suggest determining a spin of a fiber. However, the Office Action further asserts that “it would have been obvious . . . to use Dotson’s device to determine the spin, or any other property, inherent to an optical fiber.” Applicants respectfully traverse this assertion for the following reasons.

MPEP § 2143.01 states that “[o]bviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either explicitly or implicitly in the references themselves or in the knowledge generally available to one of ordinary skill in the art.” (Underlining added). Applicants respectfully assert that the Office Action has not

² From Column 5, line 57 to Column 6, line 13.

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provided any necessary teaching, suggestion, or motivation to modify “Dotson’s device” to produce the claimed invention of calculating a shift of the interference pattern in real time and determining a spin in an optical fibre based on the calculated shift in the interference pattern. Further, MPEP § 2143.01 states that “the mere fact that references can be combined or modified to produce does not render the resultant combination obvious unless the prior art also suggests the desirability of the claimed combination.” (Underlining original).

Thus, for the above reasons, Applicants respectfully request that the rejection of independent Claim 1 under 35 U.S.C. § 103(a) be withdrawn and the independent claim allowed.

Dependent Claims 2-7 depend from independent Claim 1, and are therefore also allowable for the same reasons as the independent claim, as well as for their own features. Thus, Applicants respectfully request that the rejection of dependent Claims 2-7 under 35 U.S.C. § 103(a) be withdrawn and the dependent claims allowed.

Consequently, in view of the present amendment, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal Allowance. A Notice of Allowance for Claims 1-7 is earnestly solicited.

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Should the Examiner deem that any further action is necessary to place this application in even better form for allowance, the Examiner is encouraged to contact the undersigned representative at the below listed telephone number.

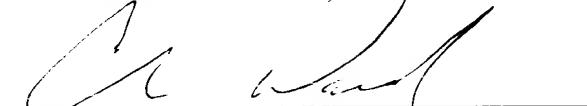


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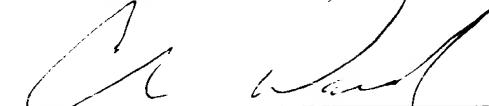
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Respectfully submitted,

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